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CONTENTS.

CLINICS.

HOSPITAL NOTES AND GLEANINGS.

Dilatation Treatment of Obstructions of the Nasal Duct.—The plan of slitting up the lachrymal canal in order to gain access to the sac and nasal duct, as first practised by Mr. BOWMAN, is now very frequently followed in the out-patients' room at Moorfields, and with most satisfactory results. Formerly, in order to allow of catheterization of the nasal duct, an incision had to be made into the sac, and risk was run that a fistula might remain. Besides this, it was a painful and very troublesome procedure, very disfiguring to the patient as long as the fistula remained open, and of course always leaving a permanent scar. The new plan is exceedingly simple, and avoids all these inconveniences. The lachrymal duct having been freely slit up on its conjunctival aspect, the introduction of a probe of any desirable size into the sac is quite easy, and when there, by elevating the handle, the nasal canal is readily entered. The slit-up duct remains permanently open, but without either disfiguring or inconveniencing the patient, and the surgeon may repeat the use of the probe at intervals for as long as may be necessary. We have seen several very threatening cases of lachrymal abscess wholly cured after two or three dilatations, but in a general way so few do not suffice. The intervals allowed should be from four days to a week, and the probe used should on each occasion be allowed to remain in for half an hour or so. The principle of cure is precisely similar to that of strictures of the urethra by the bougie.—*Med. Times and Gaz.*, June 19, 1858.

[This slitting up the lachrymal canal, in order to gain access to the sac and nasal

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duct for the dilatation of stricture, is wholly unnecessary. The object may be as readily accomplished by the introduction of Haye's probe by the lower puncta, as described in *Lawrence's Treatise on the Diseases of the Eye*, p. 920. (Philad.: 1854.)]

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Abscission of Staphyloma and Closure of the Wound by Suture.—There has been, of late, considerable discussion amongst Ophthalmic Surgeons as to the relative advantages of removing the globe, and of slicing off its front in cases of staphyloma, etc., in which it is wished to introduce an artificial eye. On the one hand, there is no doubt that abscission leaves a better stump, and secures better motion to the artificial front; whilst, on the other, it is a much more formidable procedure than excision of the entire globe. If the globe be removed, the conjunctiva falls together, the air is excluded, and very speedy union results. We have often known the artificial eye introduced within the week. If abscission have been performed, there is, in the first place, risk of most troublesome bleeding from the now unsupported choroidal vessels, and in the second, there is the almost certainty of a tedious suppuration. Often before the sclerotic collapses and the part heals, the inflammation has been severe, and the discharge very profuse, and the patient has had to undergo great and protracted suffering. And this may be stated to be the rule. It is quite exceptional for a patient to be able to resume his occupation in less than a month after such an operation, and a still longer delay is usually needed before an artificial eye can be worn. Mr. Critchett has recently attempted in two instances to diminish these inconveniences, by carefully closing the divided conjunctiva by sutures. Thus, the first step in the operation consists in dissecting back the conjunctiva and cellular tissue, as if for excision of the globe. The anterior part of the eye is then cut off, and sutures having been deeply passed, the whole is closed. The first case occurred about a month ago, but unfortunately we are unable to state the result, as the patient did not attend again. The second was operated on ten days ago, and did most successfully. The greater part of the vitreous was evacuated at the operation. The line of union was horizontal. Five sutures were employed, and the union was close and accurate. Not a single troublesome symptom followed, and a week afterwards, when the lad was again brought before the class in the operating theatre, the part was as well healed as it might have been expected to have been, had the globe been excised. Not the slightest swelling of the lids had occurred, and in another week or two an artificial eye will probably be put in.—*Med. Times and Gaz.*, July 3, 1858.

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Ligature of the Femoral Trunk on Account of Secondary Hemorrhage after Amputation.—In cases of hemorrhage from a large artery in a stump, it is a question not always easy of answer whether the vessel should be resecured from the wound, or a ligature should be placed on the main trunk higher up. In a general way, to re-open the stump and tie the bleeding mouth, would no doubt be the preferable measure; but in certain exceptional cases, Mr. Guthrie's well-known rule on this matter may be judiciously deviated from. A very cachectic man, aged about 30, had his thigh amputated by Mr. Birkett, in Guy's, a few months ago, on account of a large fibro-sarcomatous tumour in the leg. He did well afterwards, and the main ligature came away on the 16th day, all the others having previously done so. Two days after this, early one morning, profuse arterial hemorrhage took place. The stump was now almost healed. In Mr. Birkett's absence, Mr. Bryant was summoned to the man's bedside. The bleeding had been very free, but was wholly arrested by the pressure on the femoral trunk, which the dresser was keeping up. An interval of about two hours now elapsed (pressure being persevered with meanwhile). The tendency to recurrence of bleeding on removing the hand, however, at length made Mr. Bryant determine not to wait longer; and having regard to the man's feeble and cachectic condition, and the probability that ulceration of the vessel had taken place, and that its coats were diseased, he decided to put a ligature on the common femoral. This was done with complete success. The made a good recovery.—*Med. Times and Gaz.*, June 19, 1858.

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Wound of the Femoral Artery—Unusual Arrest of Hemorrhage.—In connection with the point of practice brought under debate by the above case, we cannot forbear men-

tioning very briefly one which has recently occurred in the practice of a surgeon (Mr. Swales), at Sheerness. Although not an hospital case, its interest will excuse our referring to it. A butcher's boy, aged 14, was swinging himself in the slaughter-house by a rope hanging from a rafter. By accident, he swung himself with considerable force on to the point of a large knife with which his master was employed at the other side of the room. The thigh which struck the knife was transfixed by it, and an enormous oblique gash on its inner aspect was inflicted. The bleeding was fearful, and the lad was at first believed to be dead. No doubt was felt but that the femoral trunk about its middle and several of its large branches were wounded. Feeling certain that more than one vessel in so large a wound must require ligature if the attempt were made according to rule, and fearing the results of a prolonged search and additional loss of blood in the already exsanguined state of the patient, Mr. Swales determined at once to tie the common femoral. This was quickly done—at least the armed needle was quickly passed under the trunk. On removing pressure, however, from the vessel after the ligature had been passed, it was found that no further hemorrhage occurred. After waiting some time to see if it would return, and there being no reappearance, it was decided to leave the silk *in situ*, but not to tie it. For several days and nights assistants sat by the lad constantly in readiness to apply the finger and to tie the ligature should the bleeding recur. It never did, however; and at the tenth day the ligature silk was withdrawn. The boy made a good recovery, but at the time at which the particulars of the case were communicated to us, no pulsation had returned in the popliteal or tibial arteries. It thus seemed all but certain that the original diagnosis was correct as to the trunk having been involved in the wound. The arrest of hemorrhage was no doubt due to the firm fixture of clots in the injured vessels during the long syncope which followed the accident. As to the wisdom of the daring omission to tie the ligature after it had been passed, the opinions of surgeons will perhaps differ. Few will, however, dispute, but that the reasons which induced Mr. Swales to prefer tying the main trunk to exploring the wound were sound and sufficient.—*Ibid.*

Necrosis of Fragments of Bone in Connection with Diseased Joints.—Mr. Solly has recently had two or three very interesting cases under his care in St. Thomas's, illustrating the occurrence of necrosis of portions of bone in connection with diseased hip-joint. In one, a young woman, the portions were removed by operations, which consisted in the very free laying open of the sinuses, and examination of the parts. The head of the bone was dislocated. The exfoliated portions, which were quite loose, appeared to have belonged to the acetabulum rather than to the femur. The case had originally presented very acute symptoms. The whole of the exfoliated fragments having at length been got away, the girl made an excellent recovery. In a second case it was intended to make exploratory incisions, in the belief that some dead bone would be found; but it being discovered that the man was the subject of pulmonary phthisis, the ides was abandoned. The phthisis ran a rapid course, and an opportunity was soon afforded for a post-mortem dissection of the parts. The diagnosis was then fully confirmed, several portions of bone, which had no doubt been the main causes of the persistent irritation, being found. It is to be borne in mind that these cases are examples of the occurrence of necrosis, together with joint mischief, or rather, perhaps, as a consequence of it. There is another important group, in which the necrosis of limited portions of bone in the close neighbourhood of a joint simulates mischief within its cavity. In the latter, a correct diagnosis of which is exceedingly important to perform, excision would be a blunder, while in the former, it would be justifiable, although not generally to be recommended, if there be reason to believe that the loose portions of bone are sufficient to account for the persistence of the disease, and that the original articular inflammation is tending to cure.—*Med. Times and Gaz.*, June 19, 1858.

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Adhesion of Calculi to the Bladder.—Many surgeons have expressed doubts as to whether calculi ever became really united to the bladder, and attribute to mistaken impressions during the performance of the operation the statements of lithotomists as to their having encountered difficulties in removing the stone on account of adhesions which it contracted. There can be little

doubt but this occurrence is talked of much oftener than it really occurs, but that it does so occasionally is equally beyond reasonable question. Several instances are on record in which calculi were found after death occupying the bladder and united by organic adhesions to its walls, and with such in remembrance it is not fair to set down all those in which the operator's impressions are the only obtainable evidence, as mistakes or as excuses for the indexterous use of the forceps. A case in which the evidence in support of the belief that the stone was really adherent, was unusually strong, has just occurred to Mr. Henry, at the Middlesex Hospital. The patient was a boy aged 11, in whom symptoms of stone had for long existed, but of late with considerable mitigation. A large calculus was easily detected. In the operation, Mr. Henry stated that he found it connected with the anterior part of the bladder, and difficult to reach. Repeatedly it eluded the forceps, and was eventually only seized by the aid of firm pressure made over the lower part of the abdomen. When extracted, its exterior presented some shreds of organized membrane firmly attached. These shreds were submitted to microscopic examination, and were then found to present all the characters of granulation structure undergoing organization. The lad recovered, and so happily no opportunity was afforded for inspecting the interior of the bladder.—*Med. Times and Gaz.*, June 5, 1858.

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Tumours at the Seat of the Insertion of the Sartorius Muscle.—The insertion of the sartorius muscle takes place by an aponeurotic expansion into the inner tuberosity of the tibia. This muscle is the longest in the body, and as its use, besides being an abductor and an elevator, is to cross the legs over each other, as tailors sit with them, it accounts for the name. Underneath the expansion of the tendon of insertion of this muscle most pressure exists when the legs are placed in the position just referred to, and will account for the presence of a bursa in this situation. An example of the kind was submitted to treatment by Mr. Fergusson, at King's College Hospital, on the 29th of May, in an elderly man. The tumour in this peculiar situation was the size of a small, flattened orange; but as it would have been a matter of some difficulty and danger to dissect it out in this situation—danger from the risk of inflammation—a seton was passed through it, and a puncture let out all the serum it contained, which was sanguinolent. Its cure is a question of time; but the man is at present going on well.

At Guy's Hospital, on the 1st of June, Mr. Cock removed a tumour the size of a walnut, situated over the insertion of the sartorius muscle of an elderly woman, who had had the growth for fourteen years, commencing at first in the shape of a small kernel. She had recently struck the tumour by accident, which caused violent inflammation not only in it, but in the surrounding skin. This having subsided, permitted of removal. A section of the growth showed it to be fibrous in structure, but infiltrated with blood, which might have led to degeneration of a malignant character. The result of the operation is at present satisfactory.—*Lancet*, June 19.

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Chlorate of Potash Lotion in Cancerous Ulcers.—At the Royal Free Hospital, Mr. Weeden Cooke is in the habit of employing a lotion to heal up various kinds of ulcers which is worthy of attention. It consists of half an ounce of the chlorate of potash, forty minims of hydrochloric acid, two drachms of the sedative liquor of opium, and a pint of water (twenty ounces). This has been lately used in a very severe case of ulcerated cancer of the lower lip, left side of the face, and left half of the upper lip, in a man aged forty-six, the subject of it these last five years, who had formerly undergone an operation with but temporary benefit, although the disease in him is not hereditary, and who was admitted with this cancer in a horribly foul, swollen condition. When we saw the patient on the last occasion June 1st), we observed that his general health had much improved by a course of internal medicine of bark and hydrochloric acid, and the lotion had converted a malignant sore into a healthy granulating ulcer, of a clean pink colour, with a disposition to heal up at the margins. The tendency to bleed, which was always present before, had now completely ceased; and we hope that a large portion of this ulcer may eventually cicatrize under the plan of treatment employed.—*Lancet*, June 19.

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Recoveries from Acute Tetanus.—We publish this week some particulars of the

case of recovery from tetanus which has recently occurred under Dr. Wilk's care in Guy's Hospital, and to which we referred a few weeks ago. It will be observed that, although one of the vaunted remedies had been employed, yet those who watched the case do not incline to give it the credit of the result. This caution is wise, and it would have been well had it been more often exercised by recorders of the results of trials of potent drugs. Recoveries from tetanus are very rare—a man sees but one or two in a lifetime, and he is naturally very likely to be led to believe that the powerful narcotic which in all probability had been pushed, in that instance, really exercised most important influence on the result. It is the business of the journalist to endeavour to enlarge the limits of individual experience, and we have just now an interesting example of our remarks at hand. Cases (single ones) of recovery from tetanus are at present under care in three of our London hospitals. In that in Guy's Indian hemp was the remedy. Mr. Simon, in his case in St. Thomas's pushed nicotine to the full extent; whilst in the one treated in the London ether inhalation, stimulants and opium were, we believe, the successful drugs. To these we might add a fourth, which about a year ago recovered under the care of Mr. Smith in the Leeds Infirmary, after having swallowed pints of laudanum, and a fifth which occurred rather longer ago, in the Sheffield Infirmary, when chloroform inhalation was at any rate the *ante hoc* of the happy result. All these were, of course, instances of traumatic tetanus, and approached pretty closely to its acute form. Cures of chronic and of the so-called idiopathic tetanus are not so rare. It is evident that it would be a mistake to attribute to any one of the remedies employed in the above cases special potency against tetanic disease.

Whilst on this subject, we cannot but advert with regret, as we have also done several times heretofore, to the small amount of attention which is paid to securing the absolute quiet of tetanic patients in our hospital wards. Surely a dark room, free from noise and from visitors, and without draughts, is a measure which, whatever the drug to be used, ought never to be neglected. But too often we are compelled to say the plan pursued is the reverse of all this.—*Med. Times and Gaz.*, July 3, 1858.

Recent Prevalence of Tetanus Cases.—To judge from our own impressions in visiting the different London Hospitals, we should suppose that tetanus has been most unusually frequent during the last few months. Seven fatal cases and one recovery have, we believe, happened in the London Hospital, within only a very recent period. At Guy's, at St. Thomas's, at St. Bartholomew's several cases have also occurred. At St. Mark's (for diseases of the rectum), there have been four fatal cases, in which the disease followed the ordinary operation of tying piles. An interesting case (traumatic) is still under Mr. Simon's care in St. Thomas's, in which recovery has ensued. Of this we hope before long to bring the details before the notice of our readers. Nicotine was, we are informed, the principal remedy used. A third case, in which recovery has taken place, is under care in Guy's.—*Med. Times and Gaz.*, June 19, 1858.

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Abscess in the Brain from Obliteration of the Carotid Trunk by the Pressure of a Nasal Polypus.—A pale, emaciated man, rather past middle age, was admitted, under Mr. Simon's care, into St. Thomas's on account of profuse bleeding from the nose. He was partially deaf. The left eye squinted inwards, and the right was totally blind, and had been so for some weeks. It appeared that so long as thirty years ago he had been under surgical treatment on account of a polypus in the nostril. Many attempts had from time to time been made to extract the growth, but had never been wholly successful. He was much reduced by loss of blood at the time of his admission, and a few days afterwards had an epileptiform seizure, which left him with incomplete hemiplegia of the left side. Ten days later another fit occurred, and death, in coma, followed thirteen hours afterwards. At the autopsy a very interesting and most unusual condition of things was found. In the right cerebral hemisphere were three distinct abscesses, and the brain substance generally was much softer than that of the opposite side. The cause of these was found in the entire obliteration of the internal carotid artery by the compression and irritation of a large nasal polypus, which had grown upwards and caused extensive absorption of the body of the sphenoid bone. It was impossible to trace the carotid artery through the ca-

vernous sinus, its coats being inseparably blended with the dura mater and old inflammatory material. The sphenoidal sinus was occupied by a mucous polypus. There was not the least reason to consider the polypus of malignant nature, it being evidently of the ordinary fibrous kind. There were no secondary growths in any part of the body.—*Med. Times and Gaz.*, June 19, 1858.

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Differential Diagnosis of Ovarian Dropsy and Ascites.—No fewer than four cases have recently come under our notice in which patients suffering from ovarian dropsy had been subjected to prolonged diuretic and mercurial medication, in the belief that the disease was hepatic ascites. In one case, a short time ago, in a large metropolitan hospital, the reverse mistake was made, and the peritoneal cavity injected with iodine, in the hope of obliterating an ovarian cyst, which, as the autopsy a few days afterwards proved, did not exist. Rumour states that one or two other accidents of the same kind have occurred since the iodine-injection plan came into vogue, but we are not in a position to substantiate them. Facts like these prove that the differential diagnosis between these two affections is either not so generally understood as it ought to be, or else that it is a matter of extreme difficulty. Now, there is one sign which hitherto we have never found to fail, but which is, we believe, as compared with its value, but little known. In more than one work on the diseases of women we find no mention of this symptom, although in extreme cases it is the only one which is available. The sign referred to is percussion of the lumbo-lateral region. If in a case of ascites in which the distension is so great that the hydrostatic line of level in front is not changed by posture—and it must be remembered that only in ovarian cases in which the cyst is so large as to simulate this extreme condition ought any difficulty to occur—if, in such a case, the patient be made to sit up in bed, and the loins be percussed, it will be found that the note is the same (usually dull) on both sides. If an ovarian case, no matter how great the distension, be treated in the same way, one loin will be found to be clear, and the other quite dull. The explanation is obvious; in ascites the air-containing coils of gut float as far forwards as their mesenteric attachment will permit, while in the case of an ovarian cyst, they are pushed over to the healthy side. It is not easy to conceive any condition of things, excepting entire exclusion of air from the whole tract of intestines, which could diminish the trustworthiness of this symptom. It indicates also, with unfailing accuracy, on which side the ovarian cyst, if it exist, has originated.—*Med. Times and Gaz.*, June 5, 1858.

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MEMOIR.

On the Use of Metallic Sutures and Metallic Ligatures in Surgical Wounds and Operations.—By J. Y. Simpson, M. D., Professor of Medicine and Midwifery in the University of Edinburgh, &c.

Part I. *Metallic and other Threads in Surgery; their History.*—The attention of the profession, particularly in America, has of late been strongly called to the value of metallic sutures, instead of organic sutures of silk, flax, etc., in stitching wounds. Taking, in the mean time, as granted, the advantages claimed for metallic sutures, on the score of being less irritating *material* than threads composed of animal or vegetable substance, I herewith venture on the same grounds to suggest, that the use of metallic ligatures to secure and tie the blood-vessels laid open in the sides and depths of wounds made in the course of surgical operations and injuries, is a matter of as great, if not greater, moment than the use of metallic sutures to close the outer lips of such wounds. In order, however, to explain the advantages which will, as it appears to me, probably be derived from metallic ligatures in surgery, it is necessary to consider, in the first instance, the advantages obtained by the employment of metallic sutures. And in doing so, I shall take leave to premise a few remarks on the materials out of which surgical threads have hitherto been generally made; and on the past history of metallic threads and sutures in surgery.

Modern and Ancient Suture-threads; their Material.—Among modern surgeons silk is the material most generally employed for forming the threads which they use, both to stitch together the lips of wounds, and as ligatures for the deligation of the mouths of the bloodvessels cut across by the course of the knife. Some surgeons,

however, prefer for these two purposes threads made of flax or hemp. Various other materials from the animal and vegetable kingdoms have been at various times suggested and tried as surgical threads and ligatures, such as silkworm-gut; catgut; wool; inkle; hairs; strips of leather, of parchment, and of buckskin; strings of tendon and of nerves; lines of isinglass; caoutchouc; cotton, &c.

In olden surgery threads of flax, hemp, and latterly of silk, seem to have been most commonly employed for sutures.[1] Some forms, however, of surgical threads that are supposed to have been first proposed in modern times were not unknown in ancient times. For instance, there has been some discussion as to who first proposed surgical threads made of animal materials. Catgut was publicly suggested as a proper substance for sutures and ligatures in 1813 by the learned Dr. Thomas Young;[2] and it has been doubted and questioned whether the proposal to use animal ligatures was or was not made earlier in America by Dr. Physick of Philadelphia.[3] But in all probability catgut, the form of animal thread or ligature that has been most frequently tried in modern practice, was employed in surgical sutures eight or nine hundred years ago. The celebrated Arabic writer Rhazes, who practised at Bagdad about A. D. 900, speaks[4] of stitching up wounds of the abdomen with a thread made of the string of the lute or harp ("*corda liutti vel cithare*").[5] And another Arabian author, Albucasis, who lived a century or two later, alludes in the same class of wounds to stitching a wounded bowel with a fine thread made of the twisted intestine of an animal, "*filo subtili, quod abstersum est ex intestino animalis annexo.*"[6]

Uses of Metallic Threads in Olden Surgery.—Metallic threads have been used for various purposes in surgery from the earliest historical periods;[7] but not as sutures for wounds, or ligatures for vessels. They have been employed, for example, in surgical practice for the following objects:—

1. In adjusting fractures of the lower jaw, Hippocrates, among other more important directions, advises that, after the broken ends of the bone are placed in apposition, the teeth on either side of the wound

[1] Few or none of the ancient medical authors speak explicitly as to the material of which their surgical threads were composed. In one passage Galen incidentally alludes to suture threads being made of lint or wool. (Kuhn's Galen, vol. xviii. B. p. 752; or De Med. Off. II. 10.) Paulus Ægineta mentions threads of wool for stitching wounds of the abdomen. (Dr. Adams' Translation, vol. ii. p. 260.) Fabricius Hildanus recommends the vessels in amputation to be tied, when deligation is used, with a hempen thread, "filo cannabino;" and he further speaks of sewing the edges of the wound together with silk, "filo æquali ac levi quale est sericum." (Opera, pp. 814, 815.) Severinus advises his followers to use for wounds a slender suture thread of cleaned cotton, "funiculum teneum e gossypio mundo." (De Efficaci Chirurgiae, cap. cxxii.) Fallopius in his treatise on wounds makes the following observations on the best threads for suture: "Filum autem sit robustum, sed non nimis crassum nec durum. Tertio sit æquale, ita ut præter æqualitatem non habeat nodos interpositos, nec sit putrescibile, quare fila ex gossypio, vel lana non sunt opportuna. Galenus autem (lib 3, Meth. Cap. ult.) affectebat filum molle ac satis durum, unde discebat ipse filum Caetanum optimum esse; vel loco ejus utebatur sericino; quare filum lineum sit vel sericinum linum autem Brixiense optimum esse, et nunquam marcescit, ipso ergo utendum est vel sericina materia, quæ itidem optima est. Filum præterea sit album, vel crenesinum tantum, nigrum enim vel alio colore infectum malum est." (Opera, tom. ii. p. 177.)

[2] See Dr. Young's Introduction to Medical Literature, 1813. "I have often (says Dr. Young) wished to try ligatures of catgut which might be absorbed," p. 448. In the Edinburgh Medical and Surgical Journal for 1818, vol. xv. p. 155, Dr. Young states that he proposed catgut ligatures to several surgical friends "ten years before," or in 1808.

[3] Reese and Jamieson's American edition of Cooper's "Surgical Dictionary," article, "Ligature." "To our distinguished countryman, Professor Physick, of the University of Pennsylvania, is undoubtedly due the honour of having first introduced in 1814, what is known as the animal ligature into surgical practice. His ligatures are made of chamois leather."

[4] Continens Rasis, lib. xxviii. p. 344, of Venice edition of 1509.

[5] At least the strings of the ancient Egyptian, and hence probably of the Arabic harp, were made of catgut. "The strings of Egyptian harps were," says Sir P. Gardner Wilkinson, "of catgut, as of the lyres still used in Nubia." (Popular Account of the Ancient Egyptians, vol. i. pp. 111 and 118, etc.) "Wire strings (he elsewhere observes) were not used by the Egyptians in any of their (musical) instruments, catgut being alone employed."—Ib. p. 125. The strings or cords of the old Greek harp were, in the time of Homer, formed, as we learn, from one of his similes in the Odyssey of the twisted intestine of the sheep, ἐϋστρεφὲς ἔντερον οἰός, Book xxi. xl. 408. The word "cord," as applied to the strings of the harp, etc., is itself, in fact, sufficiently indicative of the material of the strings, as originally the term χορδὴ simply signifies intestine.

[6] Methodus Medendi, lib. ii. c. 85.

[7] It is perhaps not undeserving of remark that gold and silver seem to have been drawn into wires, and in this form used for embroidery, &c., from a very early era. Gold wires and their mode of manufacture, are referred to in Exodus (chap. xxxix. 3). "Silver wire was," according to Sir Gardiner Wilkinson, "known in Egypt about 3300 years ago, being found at Thebes of the third Thotmes. It was used nearly as early as gold wire, which we find attached to rings bearing the name of Osirtasen the First, who lived more than 600 years earlier." (Wilkinson's Ancient Egyptians, vol. ii. p. 82.)

should, if they be disturbed and loosened, be tied together, two or more of them, with a gold thread.[1] Paulus Ægineta,[2] and after him various Arabic authors, recommends a thread of gold to be applied in the same manner for the same injury; and Wallner[3] has in modern times, for the same purpose, bound a silver thread around the front teeth in central fractures of the lower maxilla.

2. In attempting the radical cure of inguinal hernia, some surgeons of the middle ages, as Bernard Memis,[4] Franco,[5] Fallopius,[6] Ambrose Parè,[7] etc., applied what they termed the "golden stitch," the "golden tie," (or "*punctum aureum*,") to the neck of the hernial sac, surrounding and constricting it, with the exclusion of the spermatic vessels and cord, by a golden thread, after it was cut down upon, and the bowels returned out of it into the abdominal cavity. This golden thread was left permanently *in situ* around the neck of the sac, sometimes with, as described by Fallopius, a slim defensive gold ring or crescent around the cord (*circulum seu semicirculum ex auro non valde crassum*), and the cutaneous textures healed over all. Besides applying a permanent gold thread or wire for the cure of hernia, Parè speaks of occasionally using, for the same purpose, a temporary wire or thread of lead.

3. One mode of treatment long pursued in the management of fistula in ano consisted in passing a flaxen thread or ligature through the fistula and bowel, and gradually cutting through the intervening tissues, by the constriction and pressure of the ligature. This operation is described at length in one of the essays usually included among the Hippocratic writings.[8] Foubert, a French practitioner of the last century, substituted a metallic or leaden thread for the flax thread formerly employed in this operation.[9] The practice of dividing the structures placed between the bowel and the tract of the fistula with a ligature of lead was, with various modifications, subsequently adopted by Bosquet, Desault, Sabatier, and other continental surgeons.

4. From an early period in surgery polypi have been removed by cords or ligatures applied and tightened around their pedicles.[10] In the sixteenth century, Gabriel Fallopius recommended a thread or wire of brass, steel, or iron, like that used in harpsichords (*filum aeneum, vel chalybeatum satis crassum, vel ferreum, ex quo arpicorda constituuntur*), introduced through a silver canula, as the best ligature for the purpose of strangling the base of nasal polypi;[11] and a century ago, Levret[12] called the attention of the profession to the advantages of removing uterine and other polypi by the constriction of a silver wire, introduced through a double silver canula. Both of these forms of metallic ligature have been adopted by various followers.

Use of Metallic Pins for Sutures.—In the preceding instances the metallic wires or threads were not used as suture threads, to unite the edges and walls of wounds in the soft parts. And when first metals were used for this last purpose, they were employed in the form of fixed bodies, and not as flexible threads. For when the ancient surgeons kept the lips of some of their

[1] Adams' edition of the works of Hippocrates, p. 594.

[2] Adams' edition of the works of Paulus Ægineta, vol. ii. p. 445.

[3] South's edition of Chelius' Surgery, vol. i. p. 529.

[4] See Guy de Chauliac's Chirurgia Magna, tr. iii. d. 3, cap. 7.

[5] Traité des Hernies, pp. 59, 60.

[6] Opera Omnia, tom. ii. p. 313.

[7] English edition of Parè's works, p. 309. Parè's account is accompanied with sketches of three instruments required for performing the "punctum aureum." He figures—1, a crooked needle, like the modern aneurism-needle, "with the golden wyre put through the eye" of it; 2, mullets or pincers to remove the superfluous ends of the wire; and 3, mullets or pincers to twist the ends of the wire together. These instruments very precisely resemble some of those proposed to be used in applying metallic sutures in modern times.

[8] Adams' edition of Hippocrates' works, p. 817.

[9] See Leblanc's Précis d'Operations, vol. i. p. 97.

[10] Some ancient authors recommend the ligature to be pulled alternately at either extremity, or used with a sawing motion, like that used in working the ecraseur of M. Chassaignac in the removal of polypi and other parts. Rhazes indeed advises the ligature thrown around the base of the polypus to have knots placed upon it at short distances that the surgeon may thus exert with it a greater sawing power. (Divisio morborum, cap. xiii. p. f. 62.) Other Arabian authors, as Albucasis and Avicenna describe the same operation of sawing through the stalks of polypi with knotted threads. Mesue recommends for the purpose a ligature made of several horse-hairs tied together with knots. (Adams' Paulus Ægineta, vol. ii. p. 291.) In the thirteenth century, the Italian Surgeon, Bruno, the reputed friend of Petrarch, orders these sawing knots to be placed upon the ligatures at about the distance of a finger breadth from each other; and whenever the root of a nasal polypus is very deep he recommends the extremities of the knotted ligature to be pulled alternately till the polypus is detached. (Chirurgia Magna et Parva, lib. ii. c. 12.)

[11] Opera omnia, tom. ii. p. 298, where a figure of the canula and loop of thread is given.

[12] Sur la Cure Radicale de Plusieurs Polypes, p. 482.

wounds united for the requisite time by the metallic pins of their surgical fibulæ, and when, in later times, the metallic needle of steel, bronze, silver, or gold was left in for a few days for the same purpose, in the well-known form of the twisted suture in hare-lip, etc., the material of the suture was so far essentially metallic.

Uses of Metallic Threads for Sutures.—The idea itself of employing metallic threads for surgical sutures is not entirely modern, however much the practice may be deemed so. In his learned dissertation on the "Acia" of Celsus, John Rhodius alludes to many different forms of thread, as the *filum "lineum, laneum, sericum, xylinum, aureum, argenteum, ferreum, plumbeum."*[1] After speaking of the employment of gold and iron threads in the industrial arts, he alludes to the question of these two metallic threads being capable of use in surgical sutures; and evidently without ever having tried them, he condemns them as unfit for such a purpose. *"Alterutrum certè subtile admodum continendis vulnerum oris sine evidenti doloris molestia vix conferre potuit."*—P. 192.

During last century, however, metallic sutures appear to have been used, in some isolated examples, by one or two surgeons. Thus, Purmann, "Chief Chirurgeon to the City of Breslau, in Germany," as he is styled on the title page of the English edition of his "Chirurgia Curiosa," used, with alleged great advantage, metallic sutures in wounds of the tongue. The metallic sutures which he employed consisted of what has been specially recommended in modern times, viz., silver threads or silver wire.[2] Needles of gold and silver were long preferred by most surgeons in applying the twisted suture for the cure of hare-lip. In his *Elements of Surgery*, published in 1746, Mr. Mihles speaks of employing silver and gold threads in the operation for harelip instead of pins, and figures a needle fitted to draw these metallic threads through the sides of the cleft lip.[3]

The first surgeon in our own times who appears to have actually used metallic threads in practice, was the late Professor Dieffenbach of Berlin. In a paper on Staphyloraphy published in 1826, he has detailed several instances of that operation, in which he used leaden thread to unite and keep united the sides of the divided palate. He preferred for this purpose threads of lead to threads of silk, as he found the ends of the leaden thread could be made by mere twisting of their elongated extremities, to bring into contact the raw sides of the wound more easily than could be effected by attempting to tie and knot the ends of silk threads, by introducing the fingers so deeply within the cavity of the mouth.[4] "The difficulty," says Professor Ferguson,[5] "of keeping the first noose steady has often been alluded to; the lead ligatures, by being twisted together, obviate this difficulty." The metallic suture in staphyloraphy has been alluded to by many later surgical writers (and modified by some), as, for example, by Mr. Liston in 1831,[6] Velpeau,[7] Pancoast,[8] etc.

Metallic sutures have been adopted in

[1] De Acia dissertatio, ad C. Celsi mentem, etc. Copenhagen edition of 1672, p. 194.

[2] See his Surgery, Part I. chap. 6: referred to by Heister in his System of Surgery. London edition of 1737, p. 92. "Purman affirms (observes Heister) that he made use of *silver* threads in sutures upon this part of the tongue to great advantage."—P. 92.

[3] Elements of Surgery, p. 277.

[4] In the *Lancet* for 1826, vol. xi. p. 405, in a detailed account of Professor Dieffenbach's operation for Staphyloraphy, it is stated that—"The principal difference in Dieffenbach's mode of procedure from those recommended by Graefe, Roux, Souchet, Jonaselin, and Alcock, consists in the substitution of a finely-drawn *lead wire* for the ordinary ligatures. It is necessary that the lead should be as pure as possible; the wire needs only be a little larger than a stout pin; and if used when recently drawn, it will be found just as yielding as a waxed thread. The needles having been unscrewed or cut off, the extremities of the ligature are then twisted once or twice slightly round and put on one side of the mouth until the other ligatures are introduced. It is then recommended to commence to close the edges of the velum, by twisting with a forceps the ends of the anterior ligature carefully around each other until the edges of the wound are brought into contact. The twisted wires are to be cut off within about a quarter of an inch of the palate, and turned forward upon the roof of the mouth. The second ligature is to be managed in the same manner, and so the third, or as many as there may be. Should the inflammation be so violent as to cause great tumefaction of the parts, the ligatures may be untwisted to the necessary extent to relieve the tension, without altogether setting the edges free, and the wire may be again twisted, tighter when the inflammation subsides. To remove these ligatures it is only necessary to cut the wire on either side above the twisted part when the whole ligature may be easily brought away by a little lateral motion.

[5] Observations on Cleft Palate, and on Staphyloraphy in the Medico-Chirurgical Transactions, vol. xxviii. p. 295.

[6] Elements of Surgery, Part II. p. 193: "A ligature either of thread or of pewter wire can thus be conveyed at once; if the latter is employed, it is secured by twisting, and the ends cut off by pliers."

[7] Medicine Operatoire, 1832, tom. ii. pp. 96, 97.

[8] Treatise on Operative Surgery, 1844, p. 261.

other plastic operations besides that of staphyloraphy. Gosset stitched together the sides of a vesico-vaginal fistula with gold wire, the gold threads being left in for twenty-one days.[1] In his *Practical Essays on Plastic Surgery*, Mr. Spencer Wells observes: "The *lead* suture is sometimes useful in deep operations. A piece of soft lead wire is armed at both ends with a short needle. These are passed, by means of forceps on a needle-holder, from within outwards, and the needles removed. The ends of the lead wire are twisted together until the wound is brought into apposition. They are then cut off. This is the easiest suture to apply in cases of vesico-vaginal fistula when deep-seated. The only objection to its use is the necessity for protecting surrounding parts from irritation caused by the ends of the wire."[2]

The use of metallic threads has been extended by some European surgeons to the stitching of common surgical wounds. In the *British and Foreign Medical Review* for April, 1846, p. 286, it is stated that platinum wire as a suture-thread has thus been "successfully employed at Guy's Hospital by Mr. Morgan." One of Mr. Morgan's colleagues at that Hospital, the late Mr. Bransby Cooper, in his *Lectures on Surgery*, published in 1851, when speaking of the treatment of common surgical wounds by the interrupted suture, observe that this, "the interrupted suture, is the one most frequently used by surgeons, and silk is the ligature generally used; but platinum wire is preferred by some surgeons. As, however, it is rarely necessary or right to leave the sutures longer in the wound than forty-eight hours, I think (Mr. Cooper adds) it signifies little whether platinum wire or silk be employed."[3] Again, Mr. Guthrie, when describing the treatment of wounds left by amputation, directs that "the common integuments of the stump should be drawn together in primary amputations by sutures formed of flexible leaden wire; by threads of silk, if leaden wire are not obtainable."[4]

But in America the subject of metallic ligatures has met with more attention than in Europe. In 1832, Dr. J. P. Mettauer, of Virginia, employed them with perfect success in operating in a very aggravated case of laceration of the perineum and rectum, produced, the year previously, by a tedious labour. The laceration extended as high as three inches upwards, along the anterior wall of the rectum. After sufficiently removing and denuding the hardened edges of the lacerated cleft, and the parts exterior to them, Dr. Mettauer stitched carefully together the abraded surfaces with ligatures of lead wire.[5] "As the ligatures were applied they were tightened, so as to bring the abraded surfaces in contact; and then their ends were twisted together, and cut off of convenient length. About twelve ligatures were required to close the wound. From time to time the ligatures were tightened by twisting them, and the vaginal margins of the laceration cauterized with nitrate of silver to favour the formation of granulations, which it was judged would greatly strengthen the union in this part" (p. 114). The bowels were constipated for four days. The leaden suture threads were not removed till six weeks, "the parts having united perfectly." In concluding his account, Dr. Mettauer observes, "leaden ligatures were preferred in the management of the foregoing case, as experience had proven them, not only less irritating and liable to cut out when tightly drawn than any other material with which I am acquainted, but infinitely more convenient and effective in maintaining a uniform and perfect apposition by the ready facility of simply twisting them, and a proof that the leaden ligature may act forcibly for a long time without cutting out. When they were removed in the present instance, it could not be perceived that any material encroachment had been made upon the margins of the cleft" (p. 115).

Four years after recording his first case in the *American Journal of Medical Sciences*, Dr. Mettauer reported six additional instances in which he had operated for extensive lacerations of the perineum. "In all of those cases," he states, "the recto-

[1] See Dieffenbach's Operative Chirurgie (1845), vol. i. p. 577.

[2] Medical Times and Gaz. for 1854, vol. ii. p. 109.

[3] Lectures on the Principles and Practice of Surgery, p. 54.

[4] See Mr. Guthrie's Lectures on the more important points of Surgery in the Lancet for June 12, 1852, p. 555; and his Commentaries on the Surgery of the War in Portugal, etc., 5th edition, 1853, p. 72.

[5] A case of ununited Parturient Laceration of the Recto-Vaginal Septum, successfully treated with Metallic Ligatures. By John P. Mettauer, M. D., of Prince Edward County, Virginia; in the American Journal of Medical Sciences for 1833, vol. xiii. p. 113.

vaginal wall was completely divided, so as to convert the two passages bounded by it into one."[1] Six of the operations were attended with complete success. In the seventh case, the wound partially tore open some weeks subsequently under the distension produced by the passage of "a large indurated mass of feces, causing intense suffering;" and the patient had not yet submitted to a second operation for her cure. In all the cases in which he operated, Dr. Mettauer used the leaden thread as a suture; cutting it out, however, earlier than in his first case, or apparently from eight to twelve days after its insertion; and leaving the extremities of the wire longer than at first, in order that they might be more readily seized and tightened by an additional twist or two, if they offered to become loose during the first few days following the operation.

In concluding this contribution, Dr. Mettauer observes: "My experience leads me to believe that every case of the afflictive accident is completely remediable. I decidedly prefer the metallic suture in the treatment of this infirmity. With it we are enabled to close and confine the denuded margin of the fissure with more ease and certainty than with the silken or thread suture. And should the least gaping of the wound take place, a few twists of the free ends of the wires will enable us to close it up again. The leaden suture, too, does not cut out as soon as silk or thread."[2]

In the same year (1847) in which he published this second essay, on the cure of lacerated perineum with metallic sutures, Dr. Mettauer published an account of some cases of vesico-vaginal fistula which he had treated on similar principles. In his first case the opening in the back wall of the bladder was "fully the size of a Spanish milled dollar, and nearly circular." Its edges were denuded and brought together with eight leaden sutures; and after the extremities of these sutures were twisted and tightened, the opening was perfectly close in every part of it, and the line of contact of the opposing surfaces measured two inches. A short, light, silver catheter was permanently retained in the bladder. On the third day the wires were tightened, and again on the seventh. On the thirteenth day the ligatures were removed, and perfect union was found to have taken place along the whole line of contact. The cure was complete, and the woman bore two children subsequently without any return of the accident. Dr. Mettauer operated in five other cases of vesico-vaginal fistula, but not always with the same success. In his second case the fistulous opening was diminished, but not obliterated, after eight operations. In two of the six cases Dr. Mettauer employed thread sutures, but he did not "find them to answer so well as the metallic." His results, however, on the whole, were so favourable as to induce him to conclude with the strong allegation, "I am decidedly of opinion that *every* case of vesico-vaginal fistula can be cured, and my success justifies the statement."

Dr. Marion Sims, formerly of Montgomery, Alabama, now of New York, published in 1852 an essay on "The Treatment of Vesico-Vaginal Fistula,"[3] describing his mode of operating, and his specialties of management in this class of affections. In this essay Dr. Sims, among other suggestions, recommended the lips of the fistula, after they were refreshed by the surgeon's knife, to be held together by threads of silver wire used as a suture. Latterly a "Woman's Hospital" has been established in New York, principally for the treatment of fistulæ and other injuries resulting from parturition, and Dr. Sims has, as surgeon to that institution, had ample means of proving the valuable and happy results of his treatment. His great and acknowledged success in the cure of urino-vaginal fistulæ, and their allied lesions, he himself attributes principally and essentially to the employment of sutures of slender silver wire instead of sutures of silk, etc. At the last anniversary meeting of the New York Academy of Medicine, Dr. Sims read, and has lately published, a discourse upon the use of "silver sutures,"[4] displaying (to adopt his own words) "all

[1] "I will only," Dr. Mettauer again observes, "remark that the lacerations were extensive, none less than two inches and a-half in length." American Journal of Medical Sciences for April 1847, p. 314.

[2] The American Journal of Medical Sciences for 1847, vol. xiii. p. 330.

[3] American Journal of Medical Sciences for 1852, p. 85; or Braithwaite's Retrospect of Medicine for 1852, vol. xxvi. p. 341; or Ranking's Half-Yearly Abstract of the Medical Sciences for 1852, vol. xv. p. 231.

[4] Silver Sutures in Surgery: the Anniversary Discourse before the New York Academy of Medicine. By J. Marion Sims, M. D. New York. 1858.

the ardour and enthusiasm of a devotee." In this discourse he proposes to extend—and relates, indeed, various cases, showing that he had in his own practice extended—the use of silver sutures from vesico-vaginal fistulæ to all the common wounds and operations of surgery. Speaking of silver wire as a suture he remarks: "From the day its wonderful effects were witnessed in vesico-vaginal fistulæ in 1849, I have never used any other suture in any department of surgery" (p. 32); and "I declare it (he elsewhere observes) as my honest and heartfelt conviction that the use of silver as a suture is the great surgical achievement of the nineteenth century" (p. 8).

Dr. Sims further indulges in the following enthusiastic and prophetic remarks regarding the value of the silver suture and its "universal applicability in general surgery." "It is (he says) to revolutionize surgical dressings, and to insure more beautiful and prompt cures. With it, properly applied, there can be no gaping wounds to heal by the suppurating process, where there is skin enough to cover a stump; and in many cases erysipelatous inflammation, and even hospital gangrene, may be averted by substituting it for silk as a suture. After all amputations we must use sutures of some sort; and how often do we see silk ulcerating out, and creating such tendency to suppuration, that we are compelled to remove them before there is sufficient union to resist the retraction of the tumefied flaps. But with silver there is no inflammation, no suppuration, no cutting out of sutures, no gaping or retraction of flaps, and therefore no necessity for disturbing the dressing till all is firmly united and permanently well. This," Dr. Sims adds, "is no vain imagining; though enthusiastic, I am not wildly so, for all this has been familiar to me for the last eight years, and I but speak what I know. The next eight years will not find an educated physician anywhere who will dare to use silk sutures, for the silver-thread will now become as essential to the dressing case, as the needle itself; and if I may be allowed to venture a prediction, I will say that fifty years hence the statistics of our hospitals will show a vast improvement in their bills of mortality after great operations, and this improvement will be due mainly to the use of silver as a suture. Look at its results in injuries the vagina. Before this discovery, operations for vesico-vaginal fistula, and its congeneric affections, were often attended with risk to life, while a cure was a mere accident. But how is it now? Why, every case is easily and pefectly curable that has tissue enough to render any operation whatever practicable; while a failure is the exception to the rule. Besides, there is not the least risk to life, as there is never any fever, or the slightest constitutional disturbance. I am not claiming too much for this suture when I say, that the same relative results must be attained in all other surgical operations requiring sutures, if the same method be adopted. My language is nowise extravagant; and I shall yet live to see the day, when the whole profession of the civilized world will accord to this simple discovery the high position of being the most important contribution as yet made to the surgery of the present century."—Pp. 44 to 46.

The very earnest and unusual terms in which Dr. Sims thus describes the advantages of silver sutures, indicates at least a profound and intense conviction on his part of their great and unqualified superiority over sutures of silk and common thread. In the next part we shall endeavour to inquire into the truth and value of this opinion regarding metallic, as compared with organic threads.—*Med. Times and Gaz.*, June 5, 1858.

MEDICAL NEWS.

DOMESTIC INTELLIGENCE.

Blockley Almshouse.—At a meeting of the managers of this institution, held on the 5th of July, Dr. Robt. K. Smith was elected Chief Resident Physician, in place of Dr. McClintock.

The action of the profession in Philadelphia in regard to the appointment last year of the last-named individual to the position from which he has just been displaced, has been the subject of comment abroad.

The *Archives Générales de Médecine* for June last departs from its habitual reserve in order to notice it. Our readers may be curious to know what is thought of this case in the capital of the medical world, and we therefore translate some of the remarks of the above named journal.

"Certainly," exclaims the editor, "we

should hardly have looked for an example of medical discipline in America with its boundless liberty, its physicians furnished with diplomas which secures them a right to practice without any special responsibility, and above all its *doctresses*. Yet a recent occurrence at Philadelphia has manifested the strength of a free and voluntary association of physicians wholly unsupported by the sanction of law." After presenting a clear and succinct account of the measures adopted by the medical bodies of this city, the editor remarks that the grounds of their action were not in law nor statutory regulation, but entirely in that moral sense which makes public opinion strong; and, he adds "we have placed these facts on record because they do honour to our American brethren, and because they prove that if deliberative bodies wish to inspire respect, they are sufficient in themselves to command it without extraneous aid."

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Prizes of the Massachusetts Medical Society.—The Massachusetts Medical Society is authorized, by a donation from one of its members, to offer the sum of *one hundred dollars* for the best dissertation adjudged worthy of a prize on the following theme, viz: "To what affections of the lungs does bronchitis give origin?" The above is open to physicians of every country. The latest article on the relations of bronchitis to other diseases of the lungs was written by Dr. W. T. Gairdner, of Edinburgh, in 1850. A review of the paper can be found in the *British and Foreign Medico-Chirurgical Review* for April, 1852. Each dissertation should be designated by a motto, and accompanied by an envelope, superscribed with the motto, and containing the writer's name and address. The sealed packet accompanying the successful dissertation will be broken and the author's name announced at the annual meeting of the Society in May, 1859.

Dissertations for the above prize must be sent (post paid) to the Corresponding Secretary, Dr. Benj. E. Cotting, Roxbury, Mass., on or before April 15th, 1859.

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New Orleans School of Medicine.—Dr. Austin Flint has been appointed Professor of Clinical Medicine and Auscultation and Percussion in this school. He will be a most valuable acquisition.

Iowa State University.—The number of matriculants at the session 1857-58, was 75. Number of graduates in 1858, 20.

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New Medical Journals.—We have received four new journals within a very short period. The first is the *Savannah Journal of Medicine*, edited by Drs. Sullivan, Harris, and Arnold. The second, the *Oglethorpe Medical and Surgical Journal*, edited by Drs. Byrd and Steele, also published in Savannah, Geo. The third is the *Maine Medical and Surgical Reporter*, edited by Drs. Richardson and Cummings, published at Portland. The fourth, *Belmont Medical Journal*, edited by Dr. Afflick, and published at Bridgeport, Ohio.

FOREIGN INTELLIGENCE.

Recent Death from Chloroform. — Dr. Foucart furnishes the following particulars of the recent instance of death from chloroform, which took place at the Gros-Caillou Military Hospital. The patient was a grenadier of medium height, 45 years of age, of an apparently good constitution, though having a worn appearance. Having a swelling of the right testis, which was believed to be cancerous, M. Ceccaldi proceeded, on the morning of the 21st of May, to operate upon him, in the presence of several of the medical officers of the hospital. The soldier evinced but little emotion, and having been placed on the table, the inhalation of chloroform was commenced. This was conducted by the aide-major De Poter with great care and circumspection, the only apparatus employed consisting in a compress formed into the shape of a cone, and containing a little charpie, upon which the chloroform was poured. At first, all seemed to be going on well. There was no agitation or disordered muscular action, or indeed anything that indicated aught amiss, and the respiration was perfectly calm. At the end of two minutes some trials were made of the amount of insensibility, and the anæsthesia being found insufficient, the inhalations were continued, the apparatus being held as before to the nostrils of the patient. Suddenly, and without any circumstance having indicated what was about to follow, the patient sat upright, with haggard eyes and pupils frightfully dilated. His

arms were stretched out, and the muscles powerfully contracted, while his countenance expressed the agony of a man who was suffocating, and sought the air. He then fell back on the table, heaved a last sigh and was motionless, being, in fact, quite dead. From two and a half to three minutes had at most elapsed since the commencement of the inhalation, and M. Ceccaldi had only just applied the bistoury to the skin in order to commence the operation. Various means were put into force for the restoration of the patient, such as revulsives, tickling the glottis, præcordial frictions, the application of incandescent coals to the thorax, and artificial respiration, first by pressure of the thorax, and then by mouth to mouth. All was in vain.

At the autopsy the brain was found healthy, and not engorged. Both lungs were highly loaded, and their tissue, and especially that of the right lung, was the seat of numerous miliary tubercles. At the summit of the right lung a vast cavity was also found. The condition of the heart is not mentioned. The right testis was found converted into a tuberculous mass.

Remarking upon this case, M. Foucart observes, that it possesses several points of interest. First, it proves by an additional example the exactness of the law laid down by Louis, of the frequency of the presence of tubercles in the lungs, when another important organ is the seat of a tubercular affection—a law, however, which yet exhibits exceptions, and especially so with regard to tubercle of the testis. Next, the case establishes a positive contraindication of the employment of chloroform in patients suffering from pulmonary tubercles, or in those in whom there is good ground for suspecting their presence. The incomplete manner in which hæmatosis is accomplished in a lung so changed, easily explains the production of asphyxia by the influence of a cause which ordinarily would be insufficient for so rapid a production of it. Lastly, it is of importance to observe, that up to the moment of the accident, which occurred instantaneously, there was not the slightest disturbance of the respiration, this having been always perfectly tranquil. The patient continued to breathe to the last, and his death was not preceded by the slightest syncope. We have no account of the state of his pulse during the inhalation.—*Med. Times and Gaz.*, July 3, 1858, from *Gaz. des Hôpitaux*, No. 69.

Report on the Bréant Prize Concours.—The Committee of the Academy of Sciences of Paris (consisting of MM. Andral, Velpeau, Cloquet, Claude Bernard, and Jobert, with M. Serres as reporter) has just delivered in an elaborate report upon the essays forwarded to compete for the Bréant prize.

In instituting a prize of 100,000 francs to be decreed to the discoverer of a sovereign remedy for the cholera, M. Bréant, the reporter observes, had in view appealing to the efforts of physicians and philosophers concerning the most terrible epidemic that ravages the human race. Although unacquainted with medical science, his dominant idea evidently was to induce additional investigation into the causes of epidemics in general, and of cholera in particular. He believed that in the present state of science much remained to be discovered in the composition of the air, and the fluids it contains, as well as concerning the animalculæ which, according to him, are dispersed in infinite numbers throughout the atmosphere, and may prove to be the cause, or one of the causes of this cruel disease.

The Section of Medicine and Surgery has believed it necessary to define the terms of the question with some precision, in the present state of medical science. In medicine, in fact, as in the other natural sciences, we only know facts, which we assemble together, in order to judge of their relations, and to submit them to classification. By this procedure we rise to a still more general class of facts, which we term principles. But these principles are themselves but the formulæ of the facts, they are not causes. It is from having long misunderstood this mental process and the limits of its extent, that our science has become plunged into the labyrinth of the study of the immediate causes of disease, striking out new routes, which seemed to promise an issue, but which always finished by bringing us back to the point whence we started.

The Section of Medicine and Surgery has already pointed out to the Academy that the tendency of the Bréant prize was to lead medicine back to the search for the occult causes of disease—a search that had already impressed a direction so systematically mischievous upon science, until the flame of observation and experience came to enlighten its progress and to circumscribe the space within which it must operate. Nevertheless, keeping rigorously within the limits acces-

sible to observation, physicians have not lost sight of the investigations of Van Helmont and Stahl upon this subject; and in imitation of the latter, and of our own illustrious Lavoisier, they have pursued with great interest physical and chemical investigations on the composition of the air, in order to make application of any discoveries to the recognition and cure of epidemic diseases. While rejecting the ideas of Needham on spontaneous generation, they still pursue studies having for their object the acquisition of a knowledge of the animalculæ and all other organic matters contained in the atmosphere, which can exert any influence on the living economy. It is in this spirit the Section has endeavoured to fulfil the duty imposed upon it by the Academy, fully recognizing that the discoveries sought for with such excellent intentions by the testator, are of an extreme difficulty, and consequently will have to wait for a remote realization. It is, indeed, with this suspicion, that M. Bréant has also conceived the idea of instituting an accessory prize of 5000 francs, being the annual interest of the capital of the larger one, to be decreed as a recompense to the authors of works which have increased our knowledge of the cholera, or of other epidemic diseases. Comprehending both the high mission which has been confided to it, and the wishes of the testator, the Section has demanded that the specific for the cholera, the discovery of which is the object of the concours, shall cure this disease as certainly as cinchona does ague. It also believes that the desire of the testator would be accomplished, if during the search for causes, a prophylaxis for the cholera were discovered, as complete as that of vaccination for variola.

From November 20, 1856, the date of the last report, to May 1, 1858, the Academy has received 153 memoirs or communications. Among this large number many contain only suppositions more or less improbable, sometimes accompanied by insignificant observations, and sometimes demanding almost impossible experiments, which the Section is itself expected to institute. Other works of a more commendable character embrace the history of cholera, expand on its etiology, the fixity of its symptoms, and the constancy of the morbid changes it leaves behind it. But they add nothing to what is already known, and contain no result capable of elucidating the therapeutical management of epidemical diseases. A third class of papers relates to the statistics of cholera; but these documents, interesting probably in the localities to which they refer, bear no relation to the questions at issue. Two memoirs alone show that their authors have properly comprehended the nature of the questions put. One by a Russian physician at Smolensk, proposing to treat cholera by variolous inoculation, and the other by Dr. Ayre on the treatment of cholera by calomel. Both memoirs failed in convincing the committee of the reality of their pretensions.

To keep the future candidates within the limits of the conditions under which the prize will be awarded, the Section repeats that in order to carry off the 100,000 franc prize, it will be necessary to discover a remedy which in the immense majority of cases will cure the Asiatic cholera; or to indicate, in an incontrovertible manner, the causes of the cholera, so that by the suppression of these, the disease may be arrested; or, finally, to discover a prophylaxis as certain and as evident as is vaccination in variola.

In order to obtain the annual prize of 5000 francs, it will be necessary to demonstrate by exact processes the existence of matters in the atmosphere capable of playing a part in the production of propagation of epidemic diseases.

In the case of these conditions not being fulfilled with regard to this latter prize, it will be awarded to him who discovers a means of radically curing "dartres," or who can throw new light on their etiology. —*Med. Times and Gaz.*, July 3, 1858.

Iodine as a Febrifuge.—M. Barbaste tried the effect of this substance in 3 cases of old intermittent and paludal cachexy, for which quinine had been given in vain. He was quite surprised at the promptitude of the results he obtained from administering 30 drops of tincture of iodine in a bitter infusion in the twenty-four hours, divided into three doses. M. Seguin had, indeed, as far back as 1846, recognized the utility of iodine in obstinate chronic ague, which resisted quinine: while Dr. Manfredonia, of Naples, in 1855, found that very obstinate cases yielded rapidly to the iodide of quinine, in doses of from 1 to 2 drachms per diem. Thus far the iodine has been found only applicable to old, inveterate cases.—*Revue Méd.*

Question of the Cure of Cataract without Operation.—M. Testelin has compiled an elaborate paper investigating the reputed cases of cure of cataract without surgical operation; and he quite agrees in the conclusion come to by a very large majority of ophthalmologists who met at the Brussels congress, viz., that there is not on record any case sufficiently authenticated proving that medical treatment can arrest or cause the retrocession of a spontaneous opacity of the crystalline lens.—*Med. Times and Gaz.*, July 3, 1858, from *Annales d' Oculistique*, t. xxxix.

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Tears containing Sugar from a Case of Diabetes.—Dr. Gibb showed to the Pathological Society (May 18) some tears shed by a young married lady, aged 21, the mother of one child, who has had diabetes for two years since the child was weaned. They contained a large amount of sugar, as contrasted with that in an equal bulk of her urine, which was of the specific gravity of 1043. An evaporated drop of the tears on a piece of glass gave a much thicker and more opaque crust than was yielded by a drop of the urine.—*Med. Times and Gaz.*, July 3, 1858.

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Painless Cauterization.—M. Piedagnel has lately proposed to mix a certain proportion of hydrochlorate of morphia with caustic pastes, so as to lessen, if not to remove altogether, the pain connected with the application of such pastes. To three parts of the compound known as the Vienna powder, M. Piédagnel adds one part of the morphia salt, both in the dry state; and the paste is to be made by adding either chloroform, alcohol, or water. In fifteen minutes a dark eschar is formed. As physician to the Hôtel Dieu the author could use his anæsthetic paste only when ordering issues, &c.; but it has been tried in M. Jobert de Lamballe's ward, upon scrofulous tumours of the neck, and an encephaloid cancer of the foot. The patients stated that they had experienced little or no pain.—*Lancet*, June 19.

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Diphtheria.—Prof. Laycock, in an interesting lecture (*Med. Times and Gaz.*, May 29th) draws an analogy between diphtheria and muguet, and maintains that both these diseases are due to the presence of a parasitic fungus (*Oidium albicans*) on the surfaces of the mouth, fauces, and other mucous structures.

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Epidemic Variola at Berlin.—During the month of March the epidemic increased in virulence. The police had notice of 805 cases, and of these 60 died. Of the 805, 659 had been vaccinated, 105 had not been vaccinated, and 41 unsuccessfully vaccinated. Of the fatal cases 1[illegible] had been vaccinated, 39 were unvaccinated, and in 5 the vaccination was uncertain. Thus 7.48 per cent. of all the cases proved fatal. Among the vaccinated the proportion was 2.42 per cent., among the non-vaccinated 37.14 per cent., and of the uncertainly vaccinated 12.19 per cent.—*Med. Times and Gaz.*, June 12, 1858.

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Cholera in France.—The *Journal des Debats* has a short article on the cholera in France. The number of victims to this disease in 1854 is estimated at 150,000 only, but this is considered to be far below the real number of deaths. The deaths in the urban or town districts averaged 57 out of every 10,000 inhabitants, and in the rural districts 34 out of every 10,000. The mortality of the two sexes was pretty nearly equal in the towns, but in the country the number of female deaths exhibited a remarkable excess. The ravages of the disease throughout France were strikingly less in the first two "invasions" than in that of 1854; thus in 1832 the deaths from cholera are reckoned at 102,735 only, and in 1849 at 110,110, while in 1854 they rose to 150,000; but it is shown that the disease gains in extent what it loses in intensity.—*Ibid.*

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University of Edinburgh.—Dr. Lyon Playfair has been elected Professor of Chemistry in this school.

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Prof. Owen.—This gentleman has been elected Fullerian Prof. of Physiology at the Royal Inst[illegible]on.

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Obituary Record.—Died, in London, June 16th, 1858, of apoplexy, John Snow, M.D., well known from his researches on chloroform and other anæsthetics.

—— in Dublin, June 10th, in the 82d year of his age, Sir Philip Crampton, Bart., one of the ablest surgeons which Ireland has ever produced, and one of the most eminent surgeons of his day.